October 10, 2002

Mr. Michael M. Corletti
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SUBJECT: REVISED REQUEST FOR ADDITIONAL INFORMATION (RAI) NO. 470.006 - AP1000 DESIGN CERTIFICATION REVIEW (TAC NO. MB5491)

Dear Mr. Corletti:

The Nuclear Regulatory Commission (NRC) staff issued RAI No. 470.006 on September 27, 2002 (ADAMS Accession No. ML022670315). The staff would like to clarify this RAI to ensure (1) the information requested is clearly understood, and (2) the staff receives sufficient information to continue its review of the AP1000 design certification application. Please find the revised RAI 470.006 enclosed (the changes are marked with revision bars in the right margin).

This question was sent to you via electronic mail on October 2, 2002.

If you have any questions or comments concerning this matter, you may contact me at (301) 415-3053 or ljb@nrc.gov.

Sincerely,

Original signed and mailed 10/10/02

Lawrence J. Burkhart, AP1000 Project Manager
New Reactor Licensing Project Office***/RA/***
Office of Nuclear Reactor Regulation

Docket No. 52-006

Enclosure: As stated

cc: See next page

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Requests for Additional Information (RAIs)
AP1000 Standard Design Certification
Revised RAI 470.006

470.006

Please provide the following information in regard to the radiological consequences analysis of the design-basis loss-of-coolant accident (LOCA) as discussed in Chapter 15.6.5.3 and Table 15.6.5-2 of the AP1000 design control document (DCD):

A. How was the main control room activity level (2.0E-6 Ci/m^3 [Curies-per-cubic meter] of dose equivalent I-131) and time (0.2622 hours) at which the emergency habitability system is actuated determined? What assumptions were made in the determination of these values?

B. What is the basis for the control room unfiltered in-leakage assumption of 5.0 cfm (cubic feet-per-minute)?

C. What assumptions and inputs were used to calculate the LOCA doses in the control room due to radiation from adjacent structures and sky-shine?

D. General Design Criterion 19, in 10 CFR Part 50, Appendix A, requires that adequate radiation protection shall be provided to permit access and occupancy of the control room under accident conditions without personnel receiving radiation exposure in excess of 5 rem total effective dose equivalent (TEDE), for the duration of the accident. In Section 6.4.4 of the DCD you state that the doses to main control room personnel associated with the LOCA are bounding for all other design basis accidents. The only documented control room dose analysis is for the LOCA, found in Section 15.6.5. Please provide analyses of the doses to main control room personnel associated with the remaining design basis accident radiological analyses, or alternatively provide a discussion why the LOCA control room dose analysis is bounding for each remaining Chapter 15 radiological analysis.

AP 1000

cc:

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